UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILLIAM D. FISHER

Appeal 2006-2643
Application 09/771,092
Technology Center 1743

Decided: September 28, 2006

Before KIMLIN, GARRIS, and JEFFREY T. SMITH, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-14 and 35-42.

Claim 1 is illustrative:

1. A method comprising dispensing drops from a pulse jet and striking the pulse jet at least once, wherein the pulse jet comprises a chamber and a thermoelectric or piezoelectric ejector in the chamber.

In addition to the admitted prior art found in Appellant's Specification, the Examiner relies upon the following references as evidence of obviousness:

Bares	US 5,023,625	Jun. 11, 1991
Ford	US 6,045,759	Apr. 04, 2000

Appellant's claimed invention is directed to a method for dispensing drops from a pulse jet comprising striking the pulse jet at least once. The purpose of striking the pulse jet is to remove a bubble, such as an air bubble, which inhibits fluid dispensing from the jet (*see* Specification 2).

Appealed claims 1-14 and 35-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bares in view of Ford.

In accordance with the grouping of claims set forth at page 6 of the principal Brief, the following groups of claims stand or fall together: (1) claims 1, 9, 10, and 37; (2) claims 2, 3, and 38; (3) claims 5-8; (4) claims 11-14 and 39-42; and (5) claims 35 and 36.

We have thoroughly reviewed each of Appellant's arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejection for the reasons set forth in the Answer, which we incorporate herein, and we add the following for emphasis only.

There is no dispute that Bares discloses dispensing drops from a pulse jet of the type claimed but does not disclose striking the pulse jet. Ford, on

the other hand, discloses an apparatus and method for dispensing drops of biological materials, and Ford expressly teaches that to ensure a good prime for the dispenser, the dispenser should be tapped, or struck, to dislodge "any trapped air" (col. 27, ll. 1-6). Also, as pointed out by the Examiner, the present specification acknowledges that it was known in the art for a doctor to tap the side of a loaded syringe to remove air bubbles (*see* Specification 2, third paragraph). In addition, we agree with the Examiner that it was notoriously well known in the art to remove air bubbles for the effective operation of dispensing systems, in general. Accordingly, although Ford is not directed to a pulse jet system for dispensing fluid, we agree with the Examiner that it would have been obvious for one of ordinary skill in the art to employ a conventional means, such as striking or tapping, to remove air bubbles from a fluid dispensing system.

The principal argument advanced by Appellant is that Bares and Ford are from non-analogous arts and, therefore, not combinable. However, while it cannot be gainsaid that the dispensing systems of Bares and Ford have different structures and modes of operation, we concur with the Examiner that they are analogous art since they are both in the field of dispensing fluid and both are reasonably pertinent to the problem of dispensing the fluid effectively. Moreover, even without the disclosure of Ford, we are satisfied that it would have been obvious for one of ordinary skill in the art to resort to the well-known technique of tapping or striking the dispenser of fluid for removing problematic air bubbles therefrom. To

the extent Appellant contends that part of the present invention is the discovery of air bubbles in the pulse jet, we are confident that the problem would have been readily apparent to one of ordinary skill in the art, as would have been the solution utilized by Appellant. *In re Ludwig,* 353 F.2d 241, 243-44, 147 U.S.P.Q. 420, 421 (C.C.P.A. 1965).

As for the other separately argued claims, we fully concur with the analysis set forth in the Examiner's Answer. We will, however, emphasize the Examiner's reliance on Appellant's admission (Specification 2, 11. 12-17) that it was known in the art to use pulse jets for fabricating an array of chemical moieties, as recited in claim 11.

As a final point, we note that Appellant bases no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the inference of obviousness established by the Examiner.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2004).

AFFIRMED

clj

Agilent Technologies
Legal Department, 51U-PD
Intellectual Property Administration
P.O. Box 58043
Santa Clara, CA 95052-8043